Western Massachusetts Electric Company
Service Quality Plan 2002 - 2004
2001 Annual Report
D.T.E. 01-71-D

I. INTRODUCTION

Western Massachusetts Electric Company ("WMECO" or the "Company") hereby submits to the Department of Telecommunications and Energy ("Department") its service quality ("SQ") plan data for calendar-year 2001, pursuant to General Laws c. 164, § 1E, D.T.E. 99-84 (June 29, 2001) and the Company's approved SQ plan (December 17, 2001). This report is organized as follows:

- Section II summarizes the different SQ measures against which WMECO's SQ performance will be judged. Listed are the three safety and reliability measures, the three customer service and billing measures and the two Consumer Division measures. Additional reporting requirements not subject to the SQ penalties are also summarized.

- Section III provides the SQ measure definition, WMECO's historical performance and the statistical deadband for each of the SQ standards.

- Section IV provides descriptions of the additional reporting requirements and the related historical and 2001 data.

II. WMECO's SERVICE QUALITY STANDARDS

WMECO's approved service quality plan covers a three-year period, calendar-year 2002 through calendar-year 2004. This section describes the measures included in WMECO's SQ plan.

A. Safety and Reliability

1. System Average Interruption Duration Index

For System Average Interruption Duration Index ("SAIDI") reporting, WMECO restated its historical data to meet the new definition approved by the Department (SQ Plan § VI. A).[1] The benchmark for SAIDI was based on a fixed, five-year average of data using years 1996 - 2000. This information, as well as 2001 reportable data, can be found in Section III. A. 1.

2. System Average Interruption Frequency Index

For System Average Interruption Frequency Index ("SAIFI") reporting, WMECO restated its historical data to meet the new definition approved by the Department (SQ Plan § VI. A).[2] The benchmark for SAIFI was based on a fixed, five-year average of data using years 1996 - 2000. This information, as well as 2001 reportable data, can be found in Section III. A. 2.

3. Lost Work Time Accident Rate

In order to calculate its Lost Work Time Accident ("LTA") Rate (SQ Plan § VI. C), WMECO used the standard definition and formula from the US Department of Labor - Bureau of Labor Statistics. The benchmark for this measure, as well as 2001 reportable data, can be found in Section III. A. 3.

B. Customer Service and Billing

1. Telephone Service Factor

Currently, WMECO answers telephone calls from two locations, WMECO's Customer Service Call Center (located in West Springfield, Massachusetts) and Northeast Utilities' Credit and Collection Center (located in Berlin, Connecticut). WMECO's telephone answering performance is calculated by a Telephone Service Factor ("TSF") (SQ Plan § II. A). The TSF is the percentage of telephone calls to WMECO's Customer Service Centers that are answered in 20 seconds. Both Emergency and Non-Emergency calls will be included in calculating the percentages reported.

TSF data for both locations are available starting in March 1997. However, data on the number of WMECO calls received at the Northeast Utilities' Credit and Collection Center has only just begun to be captured and therefore this data is not available to calculate the overall TSF for prior periods. For the purposes of implementing a TSF measure in this SQ plan, WMECO proposes to calculate the standard deviation and revenue penalty based on the TSF

[1] It should be noted that due to the change in reporting criteria associated with reliability measures, the SAIDI values reported here will not match values previously reported by WMECO to the Department.
[2] It should be noted that due to the change in reporting criteria associated with reliability measures, the SAIFI values reported here will not match values previously reported by WMECO to the Department.

from the West Springfield facility. The annual TSF will be calculated as a weighted average of the individual monthly TSF statistics using the following equation:

$$TSF = \frac{\sum_{Month=January}^{Month=December} TSF_{month} \times No.of\ Calls\ Received_{month}}{\sum_{Month=January}^{Month=December} No.of\ Calls\ Received_{month}}$$

During the three years of this proposed SQ plan, WMECO will collect data from both locations, so that for the next SQ plan a TSF can be calculated based on a weighted average of all calls received in the two call centers which will more accurately show the level of service that customers actually receive. For subsequent SQ plans, TSF will be defined by the following equation:

$$TSF_{O/A} = \frac{(Calls\ Received_{West\ Springfield} \times TSF_{West\ Springfield}) + (Calls\ Received_{Berlin} \times TSF_{Berlin})}{(Calls\ Received_{West\ Springfield} + Calls\ Received_{Berlin})}$$

In addition to the TSF, during this SQ plan period, the average speed of answer ("ASA") for emergency calls and for all calls in the aggregate will be reported. WMECO began collecting ASA data in January 1998.

2. Service Appointments Met as Scheduled

WMECO began recording this data in January 2002. A description of this measure can be found below in Section III. B. 2.

3. On-Cycle Meter Readings

WMECO defines On-Cycle Meter Reading as the percentage of meters that are actually read monthly, based on the number of meters that are scheduled to be read that month. The benchmark for this measure, as well as 2001 reportable data, is shown below in Section III. B. 3.

C. Consumer Division Statistics

WMECO has obtained the Consumer Division statistics for Consumer Division Cases and Billing Adjustments (SQ Plan § III) for the ten-year period 1991 - 2000. The benchmarks for these measures are in Section III. C. 1 and 2, respectively.

D. Additional Annual Reporting Requirements

WMECO has eleven annual reporting requirements in addition to the eight performance measures. A description of each reporting requirement can be found in Section IV, below.

III. SERVICE QUALITY MEASURES

A. Safety and Reliability

1. SAIDI

SAIDI is a measure that determines the length of time the average customer is without electric service during a prescribed period of time. For the purpose of calculating SAIDI, the following events and occurrences are excluded: (i) customer equipment outages; (ii) planned outages; (iii) Excludable Major Events, as defined by the Department (*see* June 29 Order, Attachment 1, p. 2); and (iv) momentary outages less than one minute in duration. The following assumptions and criteria are also to be used for calculating SAIDI: (a) the beginning of an outage is recorded at the first report of no power; (b) the end of an outage is recorded at the point that power to customers is restored; (c) only outages affecting a primary distribution circuit are included unless the outage was caused by an overload, in which case all outages are included; (d) where only part of a circuit experiences an outage, the number of customers affected is the actual customer counts from our customer service system assigned to the specific device in trouble; (e) when power is partially restored, the number of customers restored is estimated based on the system analysis of the trouble (e.g., restoring two phases of a three-phase system restores two-thirds of the customers); and (f) when customers lose power as a result of the process of restoring power (such as from switching operations and fault isolation), the duration of these additional outages is included.

The following presents SAIDI data including the five-year average, the statistical deadband, and 2001 data. The five-year average and statistical deadband were calculated using 1996 through 2000 SAIDI data. SAIDI is presented to the nearest 100th of a minute.

Calendar Year	SAIDI (minutes)
1996	120.84
1997	87.25
1998	99.63
1999	145.45
2000	139.37
Five-year average	118.51
Standard Deviation	25.00
Deadband (+/- 1 SD)	93.51 - 143.5
2001	101.44

2. SAIFI

SAIFI is a measure that determines the number of times (frequency) the average customer experiences a loss of electric service during a prescribed period of time. For the purpose of calculating SAIFI, the following events and occurrences are excluded: (i) customer equipment outages; (ii) planned outages; (iii) Excludable Major Events, as defined by the Department (*see* June 29 Order, Attachment 1, p. 2); and (iv) momentary outages less than one minute in duration. The following assumptions and criteria are also to be used for calculating SAIFI: (a) the beginning of an outage is recorded at the first report of no power; (b) the end of an outage is recorded at the point that power to customers is restored; (c) only outages affecting a primary distribution circuit are included unless the outage was caused by an overload, in which case all outages are included; (d) where only part of a circuit experiences an outage, the number of customers affected is the actual customer counts from our customer service system assigned to the specific device in trouble; (e) when power is partially restored, the number of customers restored is estimated based on the system analysis of the trouble (e.g., restoring two phases of a three-phase system restores two-thirds of the customers); and (f) when customers lose power as a result of the process of restoring power (such as from switching operations and fault isolation), the duration of these additional outages is included.

The following presents SAIFI data including the five-year average, the statistical deadband, and 2001 data. The five-year average and statistical deadband were calculated using 1996 through 2000 SAIFI data. SAIFI is presented to the nearest 1000th of a reported outage.

Calendar Year	SAIFI (minutes)
1996	1.023
1997	0.856
1998	1.025
1999	1.103
2000	0.928
Five-year average	0.987
Standard Deviation	0.096
Deadband (+/- 1 SD)	0.891 - 1.083
2001	0.842

3. Lost Work Time Accident Rate

In order to calculate its LTA Rate, WMECO uses the definition which comes from the US Department of Labor - Bureau of Labor Statistics. The formula utilized data from the federally mandated OSHA 200 logs through 2001. On December 31, 2001, the OSHA 200 logs became obsolete and were replaced by OSHA 300 logs. Beginning in 2002, the data used to determine the LTA Rate will be derived from the OSHA 300 logs.

The number of lost work time injuries and/or illnesses per 100 full-time workers is calculated as follows:

LTA Rate per year = (N/EH) X 200,000 where:

N = number of injuries and/or illnesses

EH = total hours worked by all employees during the calendar year

200,000 = base number of hours for 100 full-time equivalent workers working 40 hours per week for a full year (i.e., 40 hours per week times 50 weeks per year).

The following presents WMECO's data on LTA including the ten-year average, the statistical deadband and 2001 data. The ten-year average and the statistical deadband were calculated using 1991 through 2000 LTA data from the OSHA 200 logs. LTA is measured to the nearest 100^{th} of an accident.

Calendar Year	LTA Rate (per 100 full-time workers)
1991	1.58
1992	1.86
1993	2.72
1994	2.86
1995	1.72
1996	1.17
1997	2.05
1998	0.56
1999	0.74
2000	0.48
Ten-year average	1.57
Standard Deviation	0.84
Deadband (+/- 1 SD)	0.73 - 2.41

2001	0.73

B. Customer Service and Billing

1. Telephone Service Factor

TSF is the percentage of telephone calls to WMECO's Customer Service Centers that are answered in 20 seconds. WMECO will measure the TSF beginning at the point that the caller makes a service selection and ending at the point that the call is responded to by the service area selected by the caller. If the caller does not make a selection, the response time shall be measured from a point following the completion of the Company's recorded menu options and ending at the point that a customer service representative responds to the call.

WMECO's telephone system currently reports the number of calls that are handled within the 20-second reporting standard. The annual TSF will be calculated as a weighted average of the individual monthly TSF statistics using the following equation:

$$TSF = \frac{\sum_{Month=January}^{Month=December} TSF_{month} \times No.\ of\ Calls\ Received_{month}}{\sum_{Month=January}^{Month=December} No.\ of\ Calls\ Received_{month}}$$

The following presents WMECO's data on TSF (from the West Springfield call center). The four-year average and statistical deadband are shown. The 2001 TSF data is also reported. TSF is calculated to the nearest 10th of a percentage point.

Calendar Year	TSF (%)
1997[3]	55.8
1998	60.0
1999	71.9
2000	80.0
Four-year average	66.9
Standard Deviation	11.1
Deadband (+/- 1 SD)	55.8 - 78.0
2001	76.3

[3] Calculation based on partial year beginning in April 1997.

WMECO's SQ Plan also defines an Overall Telephone Service Factor ($TSF_{O/A}$) which weighs and combines the TSF for both the West Springfield and Berlin Customer Service Centers. The individual components of $TSF_{O/A}$ were tracked in 2001 and a value of $TSF_{O/A}$ calculated.

	West Springfield		Berlin		
Calendar Year	TSF	No. of Calls	TSF	No. of Calls	$TSF_{O/A}$
2001	76.3	301,107	53.6	166,674	68.2

WMECO has identified two types of calls that fit the definition of emergency calls consistent with its approved SQ Plan. First, there are calls from customers to one of WMECO's published customer service numbers that require the customer to select an emergency category in order to receive expedited handling. Second, there are calls from Police and Fire Departments to a special, unpublished telephone number. WMECO defines the ASA for emergency calls as the time a customer waits while a customer service representative responds to the call. This time shall be measured beginning at the point that the caller makes a service selection and ending at the point that the call is responded to by a customer service representative. If the caller is not required to make a selection (e.g., Police and Fire Department calls), the response time shall be measured from the point the call is received by WMECO's telephone system and ending at the point that a customer service representative responds to the call. The ASA for emergency calls and for all calls in the aggregate is shown below:

	Average Speed of Answer (seconds)	
Calendar Year	Emergency Calls	All Calls
1998	27	61
1999	26	37
2000	23	25
2001	21	34

2. Service Appointments Met as Scheduled

Service Appointments Met are defined as scheduled appointments with Meter and Service Department or New Service Department representatives when the customer must be at the job site. An appointment will be considered met if the service call is completed on the day agreed upon by the customer and the Company. Excluded from this total will be any appointments that are broken by the customer (SQ Plan § II. B).

Service appointments made by our New Service Department will include all appointments that require coordination between the Company and the customer to connect or disconnect the electrical service. It will also include appointments requested by the customer to disconnect service for tree removal/trimming activity or for safety reasons to accommodate construction work on their property.

WMECO will calculate its service appointment standard to the nearest 10^{th} of a percentage point. The Company began collecting this information in January 2002 and cannot therefore calculate an average or statistical deadband for this measure.

3. On-Cycle Meter Reading

WMECO defines On-Cycle Meter Reading as the percentage of meters that are actually read in a particular month compared to the number of meters that are scheduled to be read that month. The percentage is calculated by subtracting the number of meters estimated from the total number of meters scheduled to be read[4] as shown in the following equation:

$$\text{Percent of meters read} = \frac{(\text{Number of meters scheduled to be read}) - (\text{Number of meters estimated})}{(\text{Number of meters scheduled to be read})}$$

The meter reading data is compiled monthly and aggregated for year-to-date results in a calendar year. Eligible meters include residential, commercial and industrial accounts.

The following presents WMECO's data on On-Cycle Meters Read including the ten-year average and statistical deadband which were calculated using 1991 through 2000 data. This standard is measured to the nearest 10th of a percentage point.

Calendar Year	On-Cycle Meters Read (%)
1991	93.5
1992	92.6
1993	91.8
1994	87.9
1995	88.4
1996	94.8
1997	96.9
1998	97.5
1999	97.6
2000	98.4
Ten-year average	93.9
Standard Deviation	3.8
Deadband (+/- 1 SD)	90.1 - 97.7
2001	98.1

[4] Meter reading for WMECO's seasonal accounts are only counted in the months that seasonal service is being delivered.

C. Consumer Division Statistics

1. Consumer Division Cases

Pursuant to the June 29 Order, the Department will compile and aggregate monthly the frequency of the Department's consumer complaint cases and report this data annually to WMECO, as well as offering meetings to discuss annual performance.

Consumer Division Cases are defined as those in which a written record is opened by the Consumer Division using the following criteria: (1) the individual making the complaint provides his or her identity to the Consumer Division and is either a (a) current, prospective, or former customer of WMECO, or (b) designee of the current, prospective, or former customer of WMECO; (2) the individual and/or his designee has contacted WMECO prior to lodging a complaint with the Department; (3) the Department's investigator cannot resolve the complaint without contacting WMECO to obtain more information; (4) the matter involves an issue or issues over which the Department typically exercises jurisdiction; and (5) the matter involves an issue or issues over which WMECO has control. The frequency is reported per 1,000 residential customers.

The following provides WMECO's data on Consumer Division Cases. The ten-year average and the statistical deadband are shown below and were calculated using 1991 through 2000 data. The number of cases was measured to the nearest 100th of a reported complaint.

Calendar Year	Number of Cases (per 1,000 residential customers)
1991	2.65
1992	1.98
1993	1.03
1994	1.44
1995	2.03
1996	1.70
1997	1.36
1998	0.91
1999	1.59
2000	1.30
Ten-year average	1.60
Standard Deviation	0.52
Deadband (+/- 1 SD)	1.08 - 2.12
2001	1.25

2. Billing Adjustments

Pursuant to the June 29 Order, the Department will compile and aggregate monthly the dollar amounts of Billing Adjustments and report data annually to WMECO, as well as offering meetings to discuss annual performance.

Billing Adjustments are defined as the dollar amount of residential billing adjustments per 1,000 residential customers.

The following provides WMECO's data on Billing Adjustments including the ten-year average and the statistical deadband which were calculated using 1991 through 2000 data. The Billing Adjustments are measured to the nearest 100th of a dollar.

Calendar Year	Billing Adjustment ($ per 1,000 residential customers)
1991	22.54
1992	41.18
1993	109.17
1994	32.91
1995	38.26
1996	95.58
1997	24.74
1998	56.82
1999	76.47
2000	17.31
Ten-year average	51.50
Standard Deviation	32.10
Deadband (+/- 1 SD)	19.40 - 83.60
2001	15.53

IV. Additional Annual Reporting Requirements (including definition of measure)

A. CAIDI

Customer Average Interruption Duration Index ("CAIDI") is a measure that determines the length of time to restore service to the average customer during a prescribed period of time. For the purpose of calculating CAIDI, the following events and occurrences are excluded: (i) customer equipment outages; (ii) planned outages; (iii) Excludable Major Events, as defined by the Department (*see* June 29 Order, Attachment 1, p. 2); and (iv) momentary outages less than one minute in duration. The following assumptions and criteria are also to be used for calculating CAIDI: (a) the beginning of an outage is recorded at the first report of no power; (b) the end of an outage is recorded at the point that power to customers is restored; (c) only outages affecting a primary distribution circuit are included unless the outage was caused by an overload, in which case all outages are included; (d) where only part of a circuit experiences an outage, the number of customers affected is the actual customer counts from our customer service system assigned to the specific device in trouble; (e) when power is partially restored, the number of customers restored is estimated based on the system analysis of the trouble (e.g., restoring two phases of a three-phase system restores two-thirds of the customers); and (f) when customers lose power as a result of the process of restoring power (such as from switching operations and fault isolation), the duration of these additional outages is included.

The following presents CAIDI data for the last six years. CAIDI is presented to the nearest 100^{th} of a minute.

Calendar Year	CAIDI (minutes)
1996	118.08
1997	101.97
1998	97.25
1999	131.84
2000	150.27
2001	120.52

B. Poor Performing Circuits

Poor performing circuits are defined as any distribution feeder that has sustained a circuit SAIDI or SAIFI value for a reporting year that is among the highest (worst) ten percent of WMECO's feeders for any two consecutive reporting years and has sustained a circuit SAIDI or SAIFI value for a reporting year that is more than 300 percent greater than the system average of all feeders in any two consecutive reporting years. For the identified poor performing circuits, WMECO is providing the following information: (1) the feeder or circuit identification number; (2) the feeder or circuit location; (3) the reason(s) why the circuit performed poorly during the reporting year; (4) the number of years that the circuit performed poorly (as defined above); (5) the steps that are being considered and/or have been implemented to improve the reliability of the circuit; and (6) the SAIDI or SAIFI value for the circuit. The Poor Performing Circuit information for the years 1996 through 2001 is attached to this filing.

C. Accident Reporting

In compliance with the requirements of G.L. c. 164, § 95, WMECO reports within a 24-hour period of an accident the following information:

(1) time and date of incident;
(2) time and date of the notice to the Department;
(3) location of the incident;
(4) a detailed description of the accident including information about fatalities, injuries, facilities and third-party property damage; and
(5) the name and telephone number of a utility employee who may be contacted about the accident.

In 2001, WMECO did not have any reportable accidents.

D. Restricted Work-Day Rate

Restricted Work-Day Rate means the Incidence Rate of Restricted Work cases per 200,000 Employee Hours as defined by the U.S. Department of Labor Bureau of Labor Statistics (from OSHA logs). The following presents the Restricted Work-Day Rate for the past eleven years.

Calendar Year	Restricted Work-Day Rate (per 200,000 employee hours)
1991	3.51
1992	5.02
1993	5.25
1994	6.61
1995	3.72
1996	3.74
1997	4.36
1998	6.12
1999	6.41
2000	4.80
2001	4.61

E. Customer Surveys

WMECO administered two customer surveys in 2001: (1) a customer satisfaction survey of a statistically representative sample of residential customers, and (2) a survey of customers randomly selected from those customers who have contacted WMECO's customer service department within the year being measured. Both surveys were conducted by independent entities.

In 2001, Research International conducted the first survey by sampling the opinions of 75 WMECO customers on a quarterly basis. The result for the satisfaction question[5] asked of WMECO Residential customers in 2001 was a mean score of 5.95 with a 95% confidence interval of plus or minus 0.16. Expressed as a percentage of the mean, the confidence interval is plus or minus 2.6%.

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[5] For the 1st and 2nd quarter of 2001, the Company asked a satisfaction question with slightly different wording from the question in the Department's final order that came out in the second half of 2001. The wording of the question used is the following:

> *Now, thinking about the overall level of service provided by your electric company, please use a 7-point scale to tell me how satisfied you are with the service, where "1" means "not at all satisfied" and "7" means "very satisfied." The more satisfied you generally are with your electric company, the higher the number you would give.*

The wording of the question used in 3rd and 4th quarter, corresponded exactly to the wording in the D.T.E. 99-84 final order.

In 2002 this question will be asked as part of the J.D. Power Residential survey which will be conducted once during the year by sampling the opinions of 200 WMECO customers.

Issues and Answers, an independent market research firm, conducted the second survey for WMECO by sampling the opinions of 300 WMECO customers who had called the West Springfield Customer Service Center in November 2001 for information or to resolve a problem. The results of these telephone interviews for the satisfaction question[6] was a mean score of 5.86 with a 95% confidence interval of plus or minus 0.24. Expressed as a percentage of the mean, the confidence interval is 4.0%.

During 2002, this survey will be conducted quarterly in February, May, September and November.

F. Staffing Level Benchmark

Pursuant to a staffing level agreement WMECO reached with the IBEW Local 455 bargaining unit signed on March 3, 2000, the parties agreed to a staffing level of 205 employees. As of December 22, 2001, WMECO employed 208 full-time employees subject to this agreement.

G. Damage to Company-Owned Property Greater Than $50,000 per Incident

As part of its approved SQ Plan, WMECO files annually property damage reports on incidents involving property damage to WMECO property in excess of $50,000 per incident that is attributed to Company-owned facilities. Reports are also submitted within 48 hours of the incident and include: (1) time and date of the incident, (2) time and date of the notice to Department, (3) location of the incident, (4) detailed description of the incident including information about fatalities, injuries, facilities and third-party property damage, and (5) name and telephone number of a WMECO employee who can be contacted about the incident.

In 2001, WMECO did not have any damage to Company-owned property in excess of $50,000 per incident.

[6] The wording of the question for this survey was:
"Using a scale where 1 = very dissatisfied and 7 = very satisfied; how satisfied were you with the service you received from the customer service department of WMECO?"

H. Line Loss Data

WMECO reports annually Electric Distribution Line Loss values to the nearest 10th of a percentage point. The following information was taken from WMECO's FERC Form 1 reports filed from 1991 through 2000. The 2001 data is not yet available because WMECO's FERC Form 1 will not be filed until April 30, 2002.

Calendar Year	Line Losses (%)
1991	8.5
1992	7.9
1993	6.2
1994	2.7
1995	6.6
1996	6.2
1997	10.1
1998	7.5
1999	4.3
2000	3.0
2001	Not yet available.

I. Additional Information on Major Outage Events and Electric Service Outages

As part of its approved SQ Plan, WMECO identifies and reports on an annual basis the outages that are considered Excludable Major Events. WMECO includes the total number of customers affected, the service area affected, the number of customers without service at periodic intervals, the time frame of the longest customer interruption, and the number of crews used to restore service on a per shift basis. WMECO also includes the Company's policy on tree trimming, including tree trimming cycle, inspection procedures and the typical minimum vegetation clearance requirement. With respect to Electric Service Outages, WMECO continues to report transmission and distribution outages consistent with the Department's Outage and Accident Reporting Procedures effective September 1, 2001.

Excludable Major Events - Excludable Major Events are defined as an event where at least 15% of the customers in WMECO's service territory are affected. Starting in 2002, WMECO will collect the number of crews used on a per shift basis to restore service during an Excludable Major Event. This data is not available for the 1996 and 1997 events. During an event, WMECO plans to report the estimated number of customers interrupted three times a day (approximately 7AM, 3PM, 11PM). The estimated number of customers interrupted at periodic intervals during the 1996 and 1997 events is attached to this filing. Abbreviations are used for the area affected (H-G = Hadley/Greenfield District, P = Pittsfield District, S = Springfield District). The history is listed below:

Calendar Year	Event Dates	Customers	Area	Cause
1996	12/6 -12/12	85,488	H-G/P/S	Storm Bernice
1997	3/31 - 4/3	69,458	H-G/P/S	Storm Florence
1998	None			
1999	None			
2000	None			
2001	None			

Storm Bernice was a severe heavy, wet snow storm that affected the entire WMECO service territory with 42% of our customers interrupted. The longest customer interruption was 6,159 minutes with a time frame of 9:23AM on December 7, 1996 to 4:02PM on December 11, 1996. Storm Florence was a blizzard that affected the entire WMECO service territory with 34% of our customers interrupted. The longest customer interruption was 3,753 minutes with a time frame of 7:57AM on April 1, 1997 to 10:30PM on April 3, 1997.

Tree Trimming Policy - The WMECO tree trimming policy has changed several times over the past few years. Currently, the Decision Analysis Tool, a computer model, ranks circuits to be trimmed based on customer minutes out due to trees. The Decision Analysis Tool was used to develop the 2002 trim list along with the 2002 budget and input from the Arborists and Circuit Owners. The 2002 trimming is actually a 5.3-year average cycle (some circuitry has been trimmed more often (backbones have a five-year cycle) and some less often (sidetaps have a 5.4-year cycle)) compared to a 5.4-year cycle in 2001. Also, since the model and budget determine what trimming WMECO will do, the amount of trimming done in a given year will change. Currently, trimming is "circuit-based" on a variable cycle, with backbones also being hot-spot-trimmed, mid-cycle.

WMECO's Circuit Owners currently patrol backbones of overhead distribution circuits on a quarterly basis to inspect the circuits. Once a year, the overhead sidetaps are patrolled. Customers, other employees, towns and the Arborists own observations alert the Arborists to tree concerns.

Minimum vegetation clearance requirements for roadside trimming are "8-10-15" (8 feet to the side, 10 feet underneath, 15 feet overhead). WMECO tries to avoid "topping brush" and tries to remove hazardous trees and limbs regardless of location. The specifications are somewhat different (greater) for backbone off-road lines, local off-road lines and for the enhanced tree trimming program. Obviously, clearances decrease overtime as vegetation grows and new hazards form. Also, since WMECO needs to obtain permission to trim trees, where permission is not granted or is limited, clearances are not up to these specifications.

J. Listing of Major Capital Investment

WMECO has prepared annual listings of our transmission and distribution capital investment expenditures beginning with calendar-year 1997 through calendar-year 2001. These sheets are attached to this filing. The annual listings include descriptions of the type of work performed, the amount budgeted and the actual expenditures. Dollars are set aside each year for the initiatives listed. Unless specifically stated, the expenditures are utilized throughout the WMECO service territory.

While some of the initiatives on the sheets are self-explanatory others require more detail. The following descriptions apply to the initiatives listed on each of the annual sheets.

Replace Direct Buried Cable - WMECO replaces direct buried ("DB") cables that have a high failure rate. This work includes both DB circuit backbone cables as well as DB cables in residential developments and commercial and industrial parks. WMECO budgets a specific amount for this type of work each year.

WMECO also budgets for the replacement of other types of obsolete or poorly performing equipment each year. These dollars are divided up among the following four major categories which are described below: 1) Replace Backbone Underground Cable, 2) Rebuild Overhead Lines, 3) Replace Obsolete Poles, and 4) Replace Obsolete Three-Phase Switches.

1) Replace Backbone Underground Cable - WMECO replaces backbone cable in the conventional underground ("UG") system (duct and manhole system) that has a high failure rate. Nondestructive testing is also used to identify weak spots in the UG cable system so that cable and /or splices can be replaced prior to failure. This replacement work is primarily done in our Springfield and Pittsfield UG systems.

2) Rebuild Overhead Lines - WMECO proactively replaces equipment and line designs in the overhead ("OH") system that have a history of poor performance. Additionally, obsolete facilities and/or equipment are replaced in areas that contain old OH plant. WMECO also rebuilds our overhead backbone when poor reliability performance indicates improvements are needed. In addition to rebuilding the backbone, WMECO rebuilds other portions of circuits when problems are found that impact large numbers of customers, critical customers or where several outages have occurred.

OH line rebuild work is done to improve lightning protection, animal and bird protection, equipment failure prevention, protection (fuse coordination), and sectionalizing. Some of the specific items targeted are replacing aluminum dead end bells, installing fiberglass insulators in guy wires, adding or replacing lightning arrestors, replacing armless construction with crossarms and vice top insulators, replacing small bare wire sizes with larger poly-covered wire, installing additional sectionalizing equipment or fuses, installing or replacing animal guards, and installing transformer fusing.

3) Replace Obsolete Poles (WMECO maintenance area) - WMECO inspects poles yearly in areas that contain the oldest OH plant and replaces poles that are found to be in poor condition.

4) Replace Obsolete Three-Phase Switches - WMECO inspects our three-phase padmounted air insulated switches yearly and three-phase OH switches every two years. Older switches and those found to be in poor condition are ranked and replaced as resources allow. OH switches in areas prone to animal caused failures are replaced with "animal proof" type switches.

Convert 4KV Underground System in Springfield - WMECO is in the midst of a multi-year program to replace and convert our 4,160V (4KV) distribution system to 13.8KV. These conversions provide the ability to handle additional load and improve reliability in the area that is converted. Through 2001, 30 of a total of 49 4KV circuits have been converted.

Install Recloser Automatic Loop Schemes - WMECO installs recloser automatic loop schemes between different circuits where a large group of customers can benefit from the automatic restoration provided by this type of equipment.

Install Distribution SCADA Devices - WMECO is installing distribution SCADA on remote devices in rural areas where supervisory control and operation can be utilized to reduce outage and restoration times. Circuits involved include: 19J1, 19J2, 19J3, and 19J4 out of Blandford Substation; 18K2 out of Plainfield Substation; 16B1 in Becket fed from Pleasant Substation; and the 15A3 in Westhampton fed from Gunn Substation.

Perform Enhanced Tree Trimming in Rural Towns - Beginning in year 2000, WMECO implemented Enhanced Tree Trimming ("ETT") in select areas prone to long outages caused by severe tree problems. ETT has been done in parts of the following towns: Becket, Lanesboro, Leyden, Otis, Richmond, Savoy and Worthington. ETT specifications provide for: 1) individual tree inspections of all trees that could fall on the conductor, 2) removal of all hazardous trees or tree parts, and 3) removal of all overhanging limbs.

Electronic Dispatch System - The Electronic Dispatch System ("EDS") will provide a database to keep track of WMECO's switching and tagging operations. EDS will also provide a pictorial view of the status of WMECO's distribution system that will aid the System Operations Center in outage analysis and restoration. Installation and implementation of this system has been a multi-year effort. The anticipated in service date for EDS is the second quarter of 2003.

K. Spare Component Acquisition and Inventory Policy

Spare Substation Equipment - All major spare equipment for the substation group is in the Transmission and Distribution maintenance group parts storage in Berlin, Connecticut, a relatively short distance from the WMECO service territory. Over 15 years ago the spare parts for substations were consolidated in one location for The Connecticut Light and Power Company and WMECO to reduce overall inventory and costs associated with multiple storerooms. The requirement for spare equipment in the substation area is not high and with the consolidation, better inventory is maintained with a much lower total number of parts.

The inventory for the spare parts facility is maintained based on equipment in service, repair experience and recommendations from manufacturers, suppliers, industry groups and consultants. The items in stock range from fittings for existing equipment to bushings for all types of transformers and breakers (all manufacturers, voltage classes, and styles). WMECO also has tap-changer parts and full replacement kits for the contacts in all major brands of tap-changers on the system. The dollar value of this inventory is approximately $7 million.

When new equipment is introduced to the system, the requirement for spare parts is studied. For new modern equipment many parts are available by overnight shipping with the longer lead time parts purchased and placed in stock. Electrical equipment can easily have an extended life beyond 35 years. Companies that specialize in these replacement parts supply older equipment spare parts or they are obtained by retiring some equipment and using their parts to support other like equipment. There is also the support that most electric utilities provide to other utilities when an emergency occurs. All of the Northeast Utilities ("NU") companies have both given and received this mutual assistance. The consolidated inventory has successfully met WMECO's needs for spare parts over the past 15 years.

Emergency Distribution Stock - WMECO maintains a level of emergency stock in each of its Districts to handle normal emergency needs. In the event of a major emergency WMECO relies on the support of the NU Berlin Central Warehouse ("BCW").

Support from NU - The BCW has a large emergency stock of material that is available for use by WMECO. The total dollar value of the emergency material housed at the BCW is approximately $3.2 million. This stock includes items that would be needed in the event of any type of emergency (i.e., heat wave, hurricane, etc.). In addition to the declared emergency stock, NU increases the number of overhead transformers in the BCW during the summer to better handle heat waves.

During the August 6 - 10, 2001 heat wave, a physical inventory of overhead transformers was performed daily at the BCW and throughout WMECO and NU to insure that NU would not run out of transformers. WMECO was informed of the inventory status daily during the heat wave.

The BCW has six dedicated full-time tractor trailer drivers that are used to deliver materials during emergencies. In addition to these six drivers, two stockhandlers are trained to operate the crane and delivery van. The BCW fleet consists of six tractors, eight box trailers, two flat beds, one crane truck and two vans.

Vendor Support - In addition to the emergency material stored at the BCW, Graybar, an NU vendor, maintains approximately $75,000 worth of emergency material for NU. Graybar's emergency inventory consists mainly of smaller items, such as connectors. Graybar will make deliveries as required during emergencies.

Spare Equipment Process Improvements - Howard Industries, an NU vendor, and NU Materials Management have developed a program through our Alliance Agreement in which Howard will build and store at their facility in Laurel, Mississippi a six-week supply of transformers. These transformers are a combination of single-phase overhead, single-phase padmount and three-phase padmount types totaling 570 transformers.

Materials Management will work with Howard to rotate (turn) these transformers in the most cost effective manner acceptable to both parties, but Howard will always have the transformers available for immediate shipment. In the event that we need these transformers (storm or emergency), Howard will assign two drivers to a truck and they will take turns driving to ensure a 24-hour delivery from the time of our call.

In early spring of 2002, Materials Management will work with Howard to increase the number of transformers built and stored through the summer months to ensure an adequate stock in the event of a heat storm.